

**Acupuncture in California:
Study of Education Issues and Current Educational Programs**

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Executive Summary

Consistent with recent legislation that raised the minimum number of curricular hours for California Acupuncture Board approved programs from 2348 to 3000 for all students entering such programs on or after January 1, 2005 (AB 1943 (Chu, 2002)), the Board has proposed regulations detailing the requirements of the 3000-hour minimum (http://www.acupuncture.ca.gov/law_reg/2003amended_language.pdf). With AB 1943 and SB 1951 (Figueroa, 2002), the Legislature indicated a desire for a review of several issues regarding the education of acupuncturists in California. This study presents information about the current and proposed curriculum for acupuncturists, options for licensed acupuncturists who are not subject to the new requirements, and discussion of proposals to increase the minimum hours to up to 4000.

The increase from 2,348 hours to 3,000 hours required of programs whose students enter on or after January 1, 2005, amounts to a 28% increase.¹ Overall, the 652 additional hours will be divided between increases in didactic and clinical components (502 and 150 hours respectively). Furthermore, the Board has proposed that the 502 didactic hours be distributed over eight categories.

As of January 2005, the California Acupuncture Board's 3,000-hour requirement will include a greater number of contact hours for didactic and clinical learning than the minimums required in other jurisdictions that license acupuncturists. It will also be much more detailed and directive than requirements in any other jurisdiction or the national organization that accredits acupuncture programs. Generally, the Board's proposed regulations regarding educational requirements are more detailed and permit less academic flexibility than accrediting and approval processes among other health care professions.

If reliably enforced, higher standards proposed by CAB could provide greater assurance to the public that graduates of these programs have received one of the highest levels of education in the U.S. in terms of total hours required. However, analysis of current curricula suggested the ability of some programs to meet these requirements is uncertain.

- Some schools are already close to or exceeding the total number of curricular hours required under the proposed regulations. However, the requirements as detailed by category may be more difficult for programs to meet. The review of current course offerings revealed that some CAB-approved schools have educational programs that almost mirror current approval requirements. In other words, these programs teach so close to the current requirements (1,548 didactic

¹ The 28% difference in hours required of students who enter programs before January 1, 2005 and those who enter on or after January 1, 2005 (3000-2348=652) compares to a 14% difference in hours required of California Acupuncture Board approved programs and Accreditation Commission for Acupuncture and Oriental Medicine accredited programs in Oriental Medicine as of January 2005 (3000-2625=375). In other words, there will be a significantly greater difference between the credentials of graduates of CAB approved programs before and after the new regulations are in place compared to the difference between the credentials of graduates of CAB approved programs and ACAOM accredited programs after the new regulations are in place.

and 800 clinical hours) that a significant expansion of their programs will be needed to comply with the new requirements.

- Most schools are likely to have no problem meeting the requirements for the Acupuncture and Oriental Medicine Principles, Theories and Treatments category, although there are serious questions about how “herbs”, which is considered a subset of this category, is being taught and counted towards total hours.
- There are several concerns regarding how programs will meet the Basic Sciences and Clinical Medicine, Patient Assessment and Diagnosis requirements.
- Most programs should be able to meet the Professional Development requirements but many will face challenges meeting the Case Management, Practice Management, and Public Health categories.
- Some programs will have considerable difficulty meeting the increased requirements in Clinical Practice.

In addition, some general comments regarding the proposed changes include:

- The requirements are extremely detailed and directive in nature relative to requirements found in the accrediting and approval requirements for other health care professions;
- The short time frame for implementation of such significant changes is extremely ambitious;
- The requirements are not associated with a corresponding expansion in legal scope of practice (see companion study on scope of practice); however, the requirements do include some increased focus on areas, such as clinical medicine diagnosis and testing, whose inclusion in the legal scope of practice for acupuncturists is currently being debated. In addition, some items, such as “bleeding”, are included in the proposed list of curricular requirements although they are not in the legal scope of practice.

There are also a number of questions and issues raised regarding definitions and interpretations of some of the proposed regulatory changes. With the challenges the schools will face, and the questions regarding interpretations, the Board will likely also face some difficulty implementing and properly enforcing the changes, particularly on the short time frame proposed. It is unknown whether the CAB has developed support mechanisms or contingency procedures to assist schools during this transition. It is also unknown whether or not the CAB has established mechanisms for monitoring compliance, or a system of sanctions related to a program’s inability to satisfy the required hours in each competency area.

The legislative increase to a minimum of 3,000 curricular hours required for approved acupuncture programs in California combined with the regulations proposed by the California Acupuncture Board to implement the legislation carry considerable potential implications for the public, schools, the Board itself, students, and current practitioners.

Implications for the public

The major implication for the public will be significant differences in the education, training and preparation standards of licensed acupuncturists in California without any required notice of the differences. Within a few years, the pool of California licensed acupuncturists will include people who have had as few as 1,350 hours and as many as 3,000 hours of formal education (with different substantive curricular and clinical requirements within the total numbers). However, there are no plans to clarify for the public the differences among practitioners with varying levels of education and training. There is also no indication or discussion in the proposed regulations that the increase in hours will be associated with maintenance or increase in the quality of the academic programs. The public would likely be served if continuous improvement in the substantive quality of the educational programs for acupuncturists was at least on par with the number of hours that is the current focus of the approving agency.

Implications for schools

In addition to the specific challenges for schools identified above, some schools may significantly improve their academic programs as they comply with the new regulations. However, some schools, particularly those out of state who currently see CAB-approval as an affordable business decision (to attract students who may seek California licensure at some point) may decide that the added costs (faculty and other) of increasing course offerings is no longer of value and may decline to seek or continue CAB approval status.

Implications for the Board

The California Acupuncture Board will be affected with significantly increased responsibilities for transitioning to the new requirements, assisting schools who wish to make the transition, determining and implementing enforcement mechanisms, and developing ongoing evaluation processes. There is no publicly available documentation describing monitoring or enforcement procedures or guidelines to accompany the impending curriculum changes. In addition to its current licensing and professional oversight responsibilities, and its responsibilities for conducting school approvals, the CAB may need to support 31 AOM programs through a very challenging structural transition on a very brief timeline.

Implications for students

Students will face additional financial and opportunity costs in addition to receiving increased levels of education.

Implications for current practitioners

Current practitioners, not subject to the new educational requirements, may or may not find themselves at a practice or marketplace disadvantage due to the difference between the education and training standards they were subject to and those of their more recently licensed peers. There are several options policy makers may want to consider to address this imbalance.

Increasing curriculum requirements to 4000 hours

Given the expected challenges in meeting the 3,000 hour increase in education, combined with no significant changes to the scope of practice or new safety concerns regarding the practice acupuncture in this state, it is difficult to envision the reason for or feasibility of legislatively moving to 4,000 hours as the minimum number of curriculum hours required for California Acupuncture Board approved programs.

For acupuncture, the scope of practice has not changed recently and there are no proposals to expand it significantly in the near future. As such, there are many people who were admitted to practice within this full scope under the current (2,348 hour requirement) or earlier (as few as 1,350 or less) hours of education. There has been no evidence from disciplinary actions or malpractice claims that the public is at risk from those with less education compared to those with more practicing under the same acupuncture practice act. With the increase to 3,000 hours, licensed practitioners will have even more education and training to prepare them for practicing in California although, as noted above, this increase is not tied to an expanded scope of practice. Justifying an additional 1,000 hours without a corresponding expansion of practice authority is difficult to do based on regulatory theory that would align educational requirements with scope of practice.

I. Introduction

Formal education at an approved program of acupuncture and Oriental medicine is typically² one of the two major prerequisites for licensure as an acupuncturist in California (the other requirement being successful passage of an examination). The California Acupuncture Board (CAB or Board) approves acupuncture and Oriental medicine (AOM) educational programs for the purpose of educating and protecting the public and qualifying applicants for the state licensure examination (California Acupuncture Board, 2003a).

Consistent with recent legislation that raised the minimum number of curricular hours for approved programs from 2348 to 3000 for all students entering such programs on or after January 1, 2005 (AB 1943 (Chu, 2002)), the Board has proposed regulations detailing the requirements of the 3000-hour minimum (http://www.acupuncture.ca.gov/law_reg/2003amended_language.pdf). With AB 1943 and SB 1951 (Figueroa, 2002), the Legislature indicated a desire for a review of several issues regarding the education of acupuncturists in California. This study presents information about the current and proposed curriculum for acupuncturists, options for licensed acupuncturists who are not subject to the new requirements, and discussion of proposals to increase the minimum hours to up to 4000.

Readers are encouraged to refer to the accompanying studies on Scope of Practice and Accreditation/Approval of Programs for additional relevant materials. For example, Appendix II of the Scope of Practice study includes summary comparisons of the educational requirements for various health care professions in California.

Methods

Researchers conducted a literature review and environmental scan related to acupuncture and Oriental medicine education and training and about relevant educational or credentialing changes that have occurred in other major health professions. Key informant interviews related to education and to the recent changes in curriculum were conducted. A review of the published catalogs and course schedules for 30 of the 31 CAB-approved AOM educational programs was conducted³. Finally, since numerous responses to the survey about accreditation and approval (see companion study of accreditation and approval) included data that were more pertinent to education than accreditation, this information has been addressed in this study.

To conduct the review of current course offerings at approved schools, researchers created a matrix based on the learning categories outlined for the 3,000-hour curriculum,

² The California Acupuncture Board also manages two alternative routes to licensure based on case-by-case approval of an applicant's professional preparation. See Appendix I for information about applicants applying through the tutorial and foreign-trained routes.

³ All CAB-approved schools and programs are private; no publicly-funded programs are currently available. One school, China International Medical University failed to respond to numerous requests for information by telephone, and does not have a website describing its program. Therefore, insufficient information was available to enable researchers to include the school in analysis.

as defined by the Board's proposed regulations and its Competencies and Outcomes Task Force (California Acupuncture Board - Competency Task Force, April 24, 2002). This matrix was used to plot existing courses of CAB-approved programs using their current catalogs and published course schedules⁴. Results of this analysis are discussed in section II.A., *Review of current curricula of CAB-approved AOM educational programs*.

A dilemma faced by researchers during the period of time curriculum information was collected and analyzed should be instructive for personnel associated with implementing the upcoming transition. Over the period January-March 2004, programs changed their curriculum and/or updated catalog information, which complicated the process of accounting for hours or courses consistently. It is likely that as schools transition to the new requirements, properly updating information and accounting for the allocation of course hours or content will be subject to differing interpretations by the multiple entities involved.

⁴ There is an unavoidable level of inexactitude inherent in this method of analysis based on the detail and accuracy of course descriptions in catalogs. The scope of this study only supported an indirect method of comparing instructional capacities with the new requirements. Rigorous and formal evaluation of institutional readiness, comparing actual course offerings with the intended implementation of the curricular changes recommended by the Task Force and in the Board's proposed regulations would require substantial time and resources. According to CAB approval procedures (California Acupuncture Board, 2003b), schools are required to update course catalogs to portray as accurate a picture possible of the actual program students must complete for graduation. Based on an assumption that schools are complying with this requirement, researchers reviewed course descriptions for required courses at 30 of the 31 CAB-approved programs. Inaccuracies in tabulating or reporting contact hours could result from a lack of clarity or comprehensiveness in course descriptions or competency guidelines; from reasonable differences in interpreting the language used by the Task Force or by programs; or from an absence of sufficient data that could indicate certain capacities exist. In many cases, schools did not report contact hours for their courses or provide formulas for calculating the hour-value of "credits" or "units" or for converting quarter hours to semester hours although CAB-approval is based on semester "hours," not "units" or "credits." In these cases, researchers used standard calculations based on ACAOM conversions (Accreditation Commission for Acupuncture and Oriental Medicine, October 2003) in order to compare the number of hours-to-credits on an equal basis across institutions. Conversions: One unit or credit of lecture = 1 contact hour or 15 contact hours per semester; One unit or credit of lab or clinical = 2 contact hours or 30 contact hours per semester; quarter hours multiplied by two-thirds (0.667) equal semester hours; trimester hours equal semester hours. All hours and units were converted to semester equivalents." Results therefore, may not reflect the number of contact hours a particular institution would define per unit or credit for its own courses.

II. Issues, questions, and options regarding the current and proposed educational requirements for acupuncturists

As per legislation passed in 2002, the California Acupuncture Board has issued proposed regulations for the minimum curriculum requirements at Board-approved acupuncture programs. The increase from 2,348 hours to 3,000 hours required of programs whose students enter on or after January 1, 2005, amounts to a 28% increase.⁵ Overall, the 652 additional hours will be divided between increases in didactic and clinical components (502 and 150 hours respectively). Furthermore, the Board has proposed that the 502 didactic hours be distributed over eight categories, with increases as follows: Acupuncture and Oriental Medicine Principles, Theories and Treatment (145 more hours than currently required; 22% increase); Herbs (150 more hours; 50 % increase); Basic Sciences and Clinical Medicine, Patient Assessment and Diagnosis (these two categories are combined under current regulations for a total of 558 hours; under the proposed regulations, the two categories are separated with totals of 350 hours for Basic Sciences and 240 hours for Clinical Medicine, Patient Assessment and Diagnosis for a combined total of 590 hours, an increase of 32 hours or 6%); Case Management (new category with 90 hours required); Practice Management (15 more hours; 50% increase); Professional Development (new category with 30 hours required); and Public Health (new category with 40 hours required).

Of the 502 total new didactic hours required, 29% will be in Acupuncture and Oriental Medicine Principles, Theories and Treatment, 30% will be in herbs, 6% will be in Basic Sciences and Clinical Medicine, Patient Assessment and Diagnosis, 27% will be in Case Management, Practice Management and Professional Development; and 8% will be in Public Health.

In the following table, a summary of the curricular content currently offered at Board-approved programs is presented:

⁵ The 28% difference in hours required of students who enter programs before January 1, 2005 and those who enter on or after January 1, 2005 (3000-2348=652) compares to a 14% difference in hours required of California Acupuncture Board approved programs and Accreditation Commission for Acupuncture and Oriental Medicine accredited programs in Oriental Medicine as of January 2005 (3000-2625=375).). In other words, there will be a significantly greater difference between the credentials of graduates of CAB approved programs before and after the new regulations are in place compared to the difference between the credentials of graduates of CAB approved programs and ACAOM accredited programs after the new regulations are in place.

Table: Current Curricula by semester hours^a at California Acupuncture Board Approved Schools, 2004

Note: Information contained in table is for discussion and illustrative purposes only based on summary review of published curricula; neither category totals nor grand totals should be interpreted as substitutes for totals calculated through formal accreditation and/or approval processes. See also footnote 4 above.

	Curriculum Areas ^b									
	Acupunct ure & Oriental Medicine Principles Theories and Treatmen t	Her bs	Basic Scienc es	Clinical Medicine, Patient Assessm ent and Diagnosi s	Case Manag e- ment	Practic e Manag e- ment	Profes s-ional Develo p- ment	Publi c Heal th	Clinic al Practi ce	TOTA L HOUR S
Current hours required	660	300	558 ^c		0	30	0	0	800	2,348
Proposed hours to be required 1/05	805	450	350	240	90	45	30	40	950	3,000
<i>School Name</i>										
Academy of Chinese Culture and Health Sciences	1,020	270	105	270	0	45	105	8	900	2,723
Academy of Oriental Medicine at Austin	1,116	612	162	396	12	60	0	8	1,008	3,374
Acupunctur e and Integrative Medicine College	427	193	140	117	0	20	37	7	1,130	2,071
American Col-lege of Acu- puncture and OM	795	375	330	150	30	30	45	30	990	2,775
American Col-lege of	1,001	330	270	230	30	40	60	10	1,057	3,028

Tra- ditional Chinese Medicine										
Bastyr University	587	440	374	95	15	22	37	15	1,223	2,808
Dongguk Royal University	600	260	280	180	20	27	13	7	1,174	2,561
Emperor's College of Traditional Oriental Medicine	580	234	260	173	0	33	27	0	1,267	2,574
Five Branches Institute	1,016	288	336	224	16	48	0	8	848	2,784
Kyung San University	564	200	267	127	13	27	60	7	1,387	2,652
Mercy College ^d	428	315	405	405	45	45	150	8	750	2,551
National College of Naturopathi c Medicine	966	355	688	474	0	60	60	72	1,004	3,679
<i>Table continued</i>	AOM	Her bs	Basic Sci	Clinical Med	Case Mgmt	Practic e Mgmt	Prof'l Dev't	Publi c Heal th	Clinic al	Total
New England School of Acupunctur e	758	465	480	165	60	30	45	8	915	2,926
New York College of Health Professions ^d	1,530	450	540	180	0	60	45	0	810	3,615
Oregon College of	783	256	204	129	0	28	56	41	961	2,458

Oriental Medicine										
Pacific College of Oriental Medicine	1,106	378	406	259	126	42	35	8	924	3,284
Samra University of Oriental Medicine	567	247	260	180	20	40	20	8	800	2,142
Santa Barbara College of Oriental Medicine	953	330	165	330	0	30	60	8	1,005	2,881
Seattle Institute of Oriental Medicine	1,215	135	120	195	45	30	30	30	1,260	3,060
South Baylo University	654	240	220	207	0	20	33	7	1,121	2,502
Southern Calif University of Health Sciences College of AOM	825	330	510	225	0	45	60	0	1,620	3,615
Southern Calif University School of OM & Acupunctur e	900	270	390	250	0	60	30	10	980	2,890
Southwest Acupunctur e College	1,268	495	180	345	45	45	0	22	735	3,135
Tai Sophia Institute	836	0	0	176	0	26	68	11	443+	1,560 +
University	1,125	270	330	180	0	30	120	0	840	2,895

of East- West Medicine										
Yo San University	1,125	405	465	270	15	45	30	8	950	3,313
<i>Average</i>	875	313	303	228	19	38	47	13	987	2,780

^a For comparative purposes, all course credit is presented in semester hours; where catalogue information did not clearly provide semester hour equivalents or contact hours for specific courses, conversion formulae were applied; see footnote 4 above. These comparative numbers may differ from the hours actually provided by a program and approved or accredited by appropriate agencies.

^b Curriculum areas as proposed by the CAB, 2004 proposed regulations; different terms may apply to current requirements.

^c Current CAB requirements for Western Sciences include both clinical medicine and basic science.

^d New York has a unique system of calculating contact hours based on Carnegie units, which could result in errors when comparing with non-New York schools.

A. Review and analysis of current curricula of CAB-approved AOM educational programs

In order to assess the current instructional capacities of CAB-approved educational programs and their readiness to comply with the 3,000-hour requirement that will take effect in less than one year (January 1, 2005), researchers created a matrix based on the competency categories defined by the Board in its proposed regulations and by its Competency Task Force (California Acupuncture Board - Competency Task Force, April 24, 2002). By comparing the content proposals with available course descriptions⁶, researchers plotted current course offerings into categories that will need to be present to meet the new standards. This analysis was not intended to identify strengths or weaknesses in individual institutions; rather, the analysis indicated general conclusions about the capacities of CAB-approved schools to comply with new standards within a very brief timeframe. We also underscore that this analysis includes estimates and best guesses; it is not a full review that would normally be done for accreditation and/or approval. See footnote 4 above.

Analysis of current curricula compared to Competency Task Force recommendations

In the analysis below, ranges in course hours are reported to indicate degrees of challenge that schools could face in meeting the requirements in each category within a total program of 3,000 hours. The gross averages included in the chart above likely mask the difficulties some schools will face, as a result of high-hour programs skewing an average upwards. Similarly, total hours are somewhat de-emphasized in favor of demonstrating how schools compare across each category. For example, some content categories will be easy for most schools to satisfy, while others will be almost universally difficult; in numerous cases, individual programs will have difficulties with one or more categories while the majority of schools will not.

General comments regarding the proposed curriculum requirements include:

- The requirements are extremely detailed and directive in nature relative to requirements found in the accrediting and approval requirements for other health care professions;
- The short time frame for implementation of such significant changes is extremely ambitious;
- The requirements are not associated with a corresponding expansion in legal scope of practice (see companion study on scope of practice); however, the requirements do include some increased focus on areas, such as clinical medicine diagnosis and testing, whose inclusion in the legal scope of practice for acupuncturists is currently being debated. In addition, some items, such as “bleeding”, are included in the list of curricular requirements although they are not in the legal scope of practice.

⁶ Detailed course descriptions were available for 26 schools (including two schools (Southwest and Pacific) that have three campuses each for a total of 30 schools/training programs approved by CAB). No detailed information was available for China International Medical University; see footnote 3.

More detailed comments organized by proposed curriculum category are included below.

Acupuncture and Oriental Medicine Principles, Theories & Treatment (including herbs)

Most schools are likely to have no problem meeting the requirements for the Acupuncture and Oriental Medicine Principles, Theories and Treatment category. With a few exceptions, generally programs are providing from about 600 to over 1,100 hours of instruction in this area (excluding herbal studies)⁷. The new Acupuncture and Oriental Medicine Principles category requires 805 hours of Oriental medicine and acupuncture instruction in addition to 450 hours of herbal studies. Obviously, as with each of the new curriculum categories, programs that are on the lower extreme of course offerings are likely to experience the greatest challenge in meeting the new requirements.

Herbs

Significant concerns were raised by analyzing herbal instruction present in current programs

A fundamental concern about herbal education for Board-approved programs is based in the way the Competency Task Force and CAB proposed regulations defined these requirements in their content matrix. The larger category of Acupuncture and Oriental Medicine Principles, Theories & Treatment incorporated few required herb-related knowledge components⁸; yet, in establishing the total hours for this category, the Task Force and proposed regulations simply stated, “includes 450 hours in herbs.” There has been a great deal of professional and legal controversy concerning the issue of herbal treatment. The lack of clarity and detail associated with this important competency area presents a serious challenge for educators and for the CAB to establish criteria upon which to judge compliance.

Currently, schools offer from 135 to over 600 hours of herbal studies⁹. However, herbal instruction is not standardized and depth of study appears to vary a great deal across institutions. Numerous schools deliver herbal “clinical training” as one of many treatment approaches taught in clinical training courses. This practice makes it impossible to

⁷ In this section, ranges of course hours are based on mathematical conversions described in footnote 4 which enabled a consistent unit of measurement across all institutions. These comparative numbers may differ from the hours actually provided by a program and approved or accredited by appropriate agencies.

⁸ These include: “Chinese Herbal Medicine,” “Wen Bing/Shang Han” and “Herbal prescription, counseling and preparation.”

⁹ We identified 13 programs describing less than the 300 required hours in herbal studies. For the same reasons described in footnotes 4 and 7, calculations could differ. However, key informants suggested that many times, programs count herbal learning activities and herbal dispensing activities within a clinical course as “herbal” contact hours. This creates a serious problem in validating the actual discrete contact hours in a particular subject matter. Known as “double-dipping,” this issue has been raised in CAB meetings (California Acupuncture Board, 2004). Clarification of this matter would assist the implementation of the new competency categories.

evaluate the depth of training or distinct hours of “herbal” versus other clinical treatment content delivered in these courses. In future, programs will need some way of parsing out 450 discrete hours of herbal instruction from instruction that must be provided in other required categories, each with its own required number of contact hours. This dilemma is common to several of the new competency categories.

Some programs appear to provide only a minimum of didactic instruction in herbs, which raises a concern about how students wishing to practice in California will acquire the practical knowledge needed to safely and accurately utilize herbal treatment in their practice. As mentioned above, acupuncture and Oriental medicine programs in states whose scopes of practice do not enable AOM providers to use herbal treatments could be significantly challenged with ways to provide this knowledge in “required” courses if many or most of their graduates have no need for it. Further examination of how non-California schools intend to address this requirement would be needed to predict how the issue can be resolved between these programs and the CAB.¹⁰

Basic sciences

There are several concerns applicable to basic sciences in most programs. First, there is little consistency across programs of courses offered or contact hours awarded for basic science courses. Numerous programs do not offer introductory chemistry, biology, physics or psychology courses on their own campuses. Five programs require students to complete these at another institution as a condition for admission. The new requirements include 350 hours of basic science (in at least eight specified courses) as a part of the total 3,000-hour program.

This raises the question of how the CAB will address compliance with this requirement. Current requirements placed basic sciences into a broader category, “Western sciences,” so in the past, schools have had flexible options for offering these. Currently, schools offer from 0 to over 600 hours of on-campus basic sciences courses (i.e. not including off-campus offerings or requirements). The CAB will need to establish whether or not required courses offered by a different institution for transfer count towards an approved AOM program’s 3,000 hours. If transfer credit is allowed, this could open up numerous

¹⁰ California is one of only about twenty states that permit acupuncturists to utilize herbal treatment within the legal scope of practice. Also, non-California CAB-approved schools may structure herbal course work quite differently since many states use the National Certification Commission for Acupuncture and Oriental Medicine (NCCAOM) certification and/or examination(s) as a part of their licensure requirements. Until recently, the NCCAOM has offered three different certifications: Acupuncture (consisting of two tests: a comprehensive written examination and a point location examination), Chinese Herbs, and Asian Bodywork Therapy. NCCAOM has recently added a new certification option in “Oriental Medicine” and reformatted its examinations into modules. To receive certification in Oriental Medicine, one must pass modular examinations (or document competency) in Foundations of Oriental Medicine, Acupuncture, Point Location, Biomedicine, Chinese Herbology, and Asian Bodywork Therapy. Certification in “Acupuncture” or “Chinese Herbs” only requires completing subsets of these modules. Based on their own wishes or the licensing requirements of a particular state, examinees may select the examinations or certifications they complete. Because not all states require applicants to take or pass NCCAOM’s herbal examination (where state law may not permit herbal practice), AOM educational programs in those states may place little focus on this area of instruction.

possibilities for “exceptions” to the 3,000-hour requirements. This is a general concern associated with implementation for each of the content categories, but is most evident in the basic sciences category.

A second concern related to basic sciences requirements is highly detailed list of courses combined with the lack of specificity in the components of the categories as proposed by the Board. Using basic sciences as an example, although all programs will be required to provide the specified courses for a total of 350 hours, there is no specific requirement for a minimum number of contact hours per course or content area. For example, the analysis of current curricula revealed one program where most basic science courses were on par with peer institutions (24 to 36 hours), yet students were required to take only 6 hours of physics in order to graduate. The current structure of the guidelines and proposed changes is quite open to interpretation in this way. The Board could enhance implementation by more clearly defining these requirements.

Clinical medicine

This category is related to one of the most controversial topics in U.S. acupuncture and Oriental medicine education and survey responses revealed an even split of opinion about the degree to which Western medical concepts should be incorporated into AOM training in CAB-approved programs. Current CAB requirements combine instruction in basic sciences and Western medical concepts into “Western sciences,” totaling 558 hours. According to new requirements, these categories together will require 590 hours of instruction (350 in basic science and 240 in medical concepts). Programs currently offer from 95 to 474 hours of courses in the latter. Again, this competency category is confusing since it consists of a mix of competencies and course titles. The competencies included could easily cross into other required categories in the proposed regulations. Many components could be delivered through current clinical training activities. Increasing the specificity of this category could assist schools in ensuring they comply with the new requirements, as well as addressing concerns some members of the AOM professions have about an over- or under-emphasis on Western medical concepts in AOM education.

Case management

Programs will be required to provide 90 hours of content in case management. Currently, only nine of thirty schools have any courses in this area. Among these, hours offered range from 12 to over 100 hours. There is no consistency in courses offered or content covered by the nine schools. A major concern about the Case Management category is the close relation its components have to learning activities that are often a part of clinical training. Again, the CAB will need to establish clearly defined and discrete courses or content requirements that are distinct from clinical training in order to account for required hours in each of the two categories.

Practice management

Less than half of programs provide 45 or more hours of courses in this area, which will be the minimum requirement of the new guidelines. Content weaknesses, based on a review of course descriptions, existed in jurisprudence, insurance billing and collection, practice growth and development and interdisciplinary practice. Every program required students to complete an ethics course, although hours awarded and comprehensiveness of content varied widely across programs.

Professional development

Although this category is a new requirement for AOM programs, most programs already include it in their curriculum; only five institutions currently offer 20 or fewer hours in this area and the rest offer more. The majority of courses that can be folded into this new requirement are history of medicine and research methods or student research/thesis courses. Although this is encouraging, based on review of course descriptions, there was no coverage of evidence-based medicine or understanding academic peer review processes. Contact hours for the courses ranged greatly among schools offering professional development courses, from 0 to 150.

Public health

This category is a new requirement for programs, although schools have historically required students to complete between eight and ten hours of CPR/First Aid (on- or off-campus) and training or a course in Clean Needle Technique (CNT). A small number of schools offer courses specifically addressing chemical dependency treatment, although many offer auricular acupuncture training courses that may address this topic. Thus, it was difficult to assess the prevalence of this content in current programs. Weaknesses existed in the areas of public education and community health prevention. Generally, few programs appeared to address issues such as disease, wellness or prevention from a public health or epidemiological perspective. However, two schools stood out in this content area because they require students to staff public health fairs, work in public clinics and provide free care on special open clinic days. These activities could be easily replicated by other schools, and are of note not only for the practical education they provide to students, but for their ability to bring attention to acupuncture and Oriental medicine among the general public.

Clinical practice

This critical content category was disappointingly difficult to analyze. Although all schools publicize their clinical course requirements, not all clearly define the content that is covered by these courses. Efforts to calculate the number of actual clinical practice hours associated with the competency requirements outlined in the proposed regulations was quite difficult and in many cases resulted in calculations that suggested some schools do not offer the current minimum of 800 hours required for CAB approval. Researchers are hesitant to conclude this since there is an accepted norm in professional education to award a higher number of hours-per-credit for practical education than for didactic education. Even using a standardized calculation across institutions resulted in

questionable numbers of contact hours. New York's unique system of unit calculation also complicated this process.

Despite these problems, each attempt at tabulation suggested that there are some programs whose clinical training programs are at or only slightly above the minimum currently required by the CAB. This could present a serious challenge for these programs to meet new requirements for 950 hours – for some, a 150-hour increase. Calculations or actual reports of clinical hours ranged from 800 hours (assumed) to well over 1,100 hours in several cases. Fifteen programs already exceed 950 hours of clinical training.

As mentioned previously, curriculum analysis supported the assertion by some key informants that there will be a major challenge for programs and for the CAB to sort out skill and knowledge acquisition associated with other required competency categories from that which must be included in the 950 required hours of clinical training. This is a significant concern since schools may justifiably be confused about whether or not they must exclude content currently delivered in clinical activities, or duplicate this content in a separate didactic course, or whether duplicated content should or should not be calculated into “clinical” training hours. In order to avoid “double-dipping” and inconsistency in judging compliance, additional specification of required components and clear procedures for verification will be essential.

Questions and issues raised in analysis of curricula of CAB-approved schools¹¹:

1. How are required, off-campus courses that are not offered by the institution counted towards a program's 3,000 hours? For example, if 350 hours of prescribed basic sciences courses are to be included in a school's 3,000 curriculum hours, how should basic sciences courses not offered by the institution, but which must be taken off-campus and transferred into the program, be counted? Examples: ACCHS, Bastyr.
2. Some schools combine course content across competency categories, e.g., History of Medicine/Medical Terminology (SCUHS), Combined Western and Eastern Nutrition (ACCHS). How are sufficient contact hours for *each* of the content areas verified if in a combined course? Will schools be encouraged to separate content on this basis? How will hours requirements for each separate competency category be enforced for combination courses?¹²

¹¹ Schools listed as examples are provided for reference purposes only. Identified schools provide one example of the issue. The identification of each school is in no way intended to indicate weaknesses in these programs, or that the issue exists exclusively in identified schools. Further review of the issues listed must include examination for all schools, not just those identified.

¹² This is a general problem with the way content recommendations were defined by the Competencies Task Force and proposed by the Board. Throughout the matrix of competencies and content categories, there is a mix of items that look and sound like course titles (e.g., Medical terminology) and items that describe course content or outcomes of learning (e.g., treatment, contraindications and complication). Some of the latter already exist in educational programs, but may be integrated into an entire learning program, may occur only in clinical training, or may be divided between categories in the matrix. For example, “problem solving/critical thinking skills” is located in the clinical medicine category. Is it then acceptable and verifiable to spread this content across courses or categories? Alternately, Treatment of Chemical Dependency is included in the public health category. Does this mean that a distinct course must be

3. Herbal education is a major concern. Among findings of this study are: inability to identify and verify discrete “herbal” learning or practice within clinical contact hours, inability to verify 450 hours of discrete instruction of herbal content that may be included in other didactic courses. Herbal content in the competencies outline is lumped into one 450-hour requirement without defining what the focus or outcomes should be. For example, if one program provides 250 hours of didactic instruction and 200 hours of practicum, is this equivalent to a program that provides 400 hours of didactic instruction and 50 hours of practicum? Some herb-related content is included in the Oriental Medicine Principles category – could herbal education be more specifically separated and defined by the Board? Correspondingly, does the 450 lump sum of herbal education included in the Oriental Medicine Principles category imply that it is optional for a program to provide clinical or practical learning activities associated with herbal treatment?
4. Under which competency category are hours counted for “case study,” “introduction to clinical practice” and similar courses that are primarily didactic in nature? Several schools include these courses in their clinical hours; for example, Problem Based Clinical Learning Session (ACAOM) and “case study” (Kyung San). If the CAB intends that there be a difference between credit awarded in didactic and clinical education, categorization of these courses needs to be consistent across institutions and clearly defined.
5. Pain management and treatments associated with AIDS are two examples of significant professional practice issues or competency areas that were not specifically addressed in the matrix. Since these are absent from the “requirements”, should courses in these significant areas be counted as electives? Was the item, “special care/seriously ill patients” (Case management) intended to address these? If so, how broadly can this item be interpreted by programs or the Board? Does this raise similar questions for other poorly defined items in the matrix?
6. For graduation, some schools (e.g., ACTCM, NYCHP) require students to complete a minimum number of elective hours from a list of course offerings. If this practice is to remain, how can the Board verify that every graduate has had instruction in the required competency areas when individual students may choose whatever interests them? Since the courses are provided as a part of the program and students are required to take courses from the list, it may be justified that the school offers all the requirements outlined in the 3,000 hour matrix, but student choices will dictate the actual content they learn¹³.

provided? If this content is addressed in three or four different existing courses, how can the Board measure whether or not a sufficient number of “hours” is provided from a public health perspective?

¹³ A contrasting complication of this issue is for schools whose unique philosophy or approach requires students to take courses (e.g., Chinese language) that are not described in the 3,000 hour requirements. Also, some schools require very deep study of some recommended competencies (particularly exercise, e.g., Qi Gong, Tai Qi) for graduation. Do the competency recommendations suggest that these schools eliminate “superfluous” requirements in order to devote resources to licensing requirements? Or, will these schools be placed at a market disadvantage by requiring students to take additional courses that other schools do not require? Some additional course requirements are substantial, from 60-90 hours beyond the average. A related concern is for “advanced study” courses that are a part of the minimum requirements for

7. Several schools require “review” courses for graduation, and count the credits for these courses in their overall hours (e.g., Five Branches, Kyung San). If the courses are truly review, why are credits counted for graduation? How has the CAB addressed this duplication of content hours? Will “review” credit be considered acceptable to meet the 3,000-hour requirements?

The exercise of plotting existing course offerings was instructive regarding a final issue for the Board and for schools. Comparing the course descriptions with the items on the competencies matrix provided a fairly easy way to allocate courses and hours to the new required categories. However, in many cases, shifting courses based on their described content, rather than the title of the course resulted in subtracting these hours from another category. Some programs whose hours are quite close to the minimum required for CAB approval may experience difficulty “filling in” or “replenishing” hours in some competency categories if they use existing courses to meet new requirements. It is unknown whether or not the CAB has developed any support mechanisms or contingency procedures to assist schools during this transition. It is also unknown whether or not the CAB has established mechanisms for monitoring compliance, or a system of sanctions related to a program’s inability to satisfy the required hours in each competency area.

B. Survey and key informant responses related to acupuncture and Oriental medicine education

A companion study of accreditation and approval for California AOM educational programs included a survey of CAB-approved institutions. Some responses to the open-ended survey questions included data more pertinent to educational issues than accreditation and are therefore included in this section of the report.

Generally, respondents believed that CAB educational requirements were adequate to prepare contemporary practitioners. The recent increase in curriculum requirements (to 3,000 hours), including more laboratory and clinical training were appreciated, some thought overdue.

Informant reactions to changes in curriculum by California Acupuncture Board

Numerous survey respondents echoed key informants in suggesting that competencies and quality of education are more meaningful than prescribing a certain number of course hours that a program must contain. In addition to survey responses indicating areas of curriculum enhancement recommended by administrators at selected schools (listed below), there was some concern that schools are being required to teach courses whose content is not reflected in the state examination. An example is Qi Gong, a fundamental technique in Oriental medicine, which is not included on the state examination according to respondents. Survey respondents suggested that education in therapeutic exercise in current programs may not be sufficient for practice. Thus, relevancy and student

graduation. Should these be moved to an elective list so that schools can focus on “minimum” requirements to meet the 3,000 hour standard?

demonstration of competencies as an outcome of education was more a more significant concern for educators than prescribing a number of hours.

Several academic administrators reported that faculty at most schools teach with examination content areas in mind (“teach to the exam”), and that the increase of hours required by CAB will increase pressure on faculty to crowd subject coverage into their courses. These reports echo the California Legislature’s concern that the profession is currently in an opportune position to comprehensively examine the correlation between the most common practice modalities used by practitioners and their legal scope of practice, using this information to inform examination and curriculum design in the most efficient and relevant manner.

Similarly, some survey respondents indicated that although their institutions are committed to educational improvement, either the resources required to comply within the short timeframe, or the potential impacts of making the changes required by the recent increase of hours, will continue to create difficulties. A respondent from one of the three out-of-state schools surveyed reported the program is considering dropping its CAB approval status because the costs of effecting structural and content changes necessary to maintain approval will exceed the benefit to its students.

Finally, informant data concerning the Board’s recent increase of hours and competency requirements raised questions about how to address gaps in the preparation of current care providers who graduated from programs before requirements were increased. Informing perspectives on this question were beliefs that catch-up requirements for professionals who may have graduated with as few as 1,200 credit hours decades ago will be so burdensome as to drive some providers out of practice. Contrasting this perspective were professionals and educators who hold a general belief that all health care professionals have a responsibility continually to increase their professional competencies whether this is required or not. See also section below on impact of changes on practitioners.

Areas of curriculum enhancement suggested by survey respondents

Respondents suggested specific educational elements they believed should be incorporated into changes over the coming years to prepare students for contemporary practice. Some but not all of these may be included in the proposed changes:

- Up-to-date education about herbal interactions with over-the-counter drugs and nutritional supplements being used commonly by patients
- Herbal treatment: case management, formula adjustment, herbal treatment strategy
- Classic Chinese medical texts
- Incorporation of techniques other than Traditional Chinese Medicine (TCM): Five Element, Vietnamese, Japanese, etc.
- Use of hot/cold packs
- More clinical experience in cupping & gua sha
- Medical report writing

- Patient case management, insurance billing, workers compensation, hospital and clinical practice, patient management skills
- More clinical experience in physical examination
- More clinical exposure to diagnostic imaging, requisition and interpretation of labs
- More clinical experience in use of therapeutic exercise
- 200 hours of Oriental Medicine specialty care experience, including pediatric, geriatric, family practice, gynecology, and obstetrics
- Clinical experience in working with other health professionals
- More instruction and clinical in orthopedics and pain management
- 30 more hours apiece in microbiology, endocrinology (hormonal interaction), nutrition, neuroanatomy

One respondent expressed concerns about the entry requirements that are generally applicable across acupuncture and Oriental medicine education in the U.S., and utilized by both CAB and the Accreditation Commission for Acupuncture and Oriental Medicine (ACAOM). This respondent suggested that ACAOM review the pre-admission requirements that allow students to enter a graduate-level professional training program with only 60 hours of undergraduate work¹⁴. This respondent expressed concern that the lack of better preparation (a bachelor's degree) places an academic or intellectual burden on students enrolled in demanding training programs, in addition to a "lower" admission standard diminishing the relative value of the professional degree compared to standards in other health professions. Our review of educational requirements in other major health professions revealed that some professions allow similar less-than-bachelor's degree entry, although many individual schools require a bachelor's degree. Our review of AOM course catalogs indicated that the same is true of these programs.

One respondent suggested focusing on building graduates' confidence to practice independently through increasing clinical experiences. This respondent opined that most errors in treatment are of "omission" rather than "commission;" meaning that it is not improper application of Oriental medicine techniques, but lack of skill or knowledge (e.g., missed diagnosis, substandard treatment, improper referrals) that constitutes treatment errors.

Acupuncture and Oriental medicine education hindered by lack of expertise

Several key informants reported there is a dearth of trained or experienced higher education administrators in California acupuncture training programs, although California may not be alone in this area. For example, the Accreditation Commission for Acupuncture and Oriental Medicine's Executive Director indicated that weak administration and institutional viability are the most common reasons schools are denied

¹⁴ Although the comment was directed to ACAOM, CAB currently requires only that candidates for admission shall have successfully completed an approved high school course of study or have passed a standard equivalency test. (California Code of Regulations 1399.436(d) The CAB has proposed a 2-year college-level prerequisite but does not currently require undergraduate courses prior to admission to an AOM program.

accreditation and why some eventually go bankrupt. ACAOM views administrative strength of an institution as a critical benchmark in accrediting programs (Bigg, December 2, 2003). Major areas of weakness in California AOM educational institutions mentioned by key informants included:

- low operating margins due to small economies of scale
- low salaries
- weak competitive advantage in hiring skilled administrators
- poor collaboration or communication with other higher education institutions (for resource sharing and skill development)
- nepotism
- few resources for faculty professional development and research, and
- poor understanding of institutional research concepts or practices.

Survey respondents expressed the view that California Acupuncture Board members' lack of experience in higher education administration and curriculum development has created problems for schools that must comply with the new curriculum requirements. Although a more comprehensive study of this issue would be instructive, based on the limited information gathered for this study, it appears that AOM schools may be "out of sync" with academic and administrative approaches in higher education. There was general agreement that this area of weakness in the AOM profession deprives educational programs of strong leadership, positive management climates, and access to resources to ensure the strategic and competitive viability of schools.

ACAOM's emphasis on administrative leadership and organizational structure as a critical benchmark for accreditation was remarked upon by survey respondents who echoed the agency's Executive Director (Bigg, December 2, 2003) when he stated that participating in the accreditation review process focuses a program's attention on its own strengths or weaknesses in this area. Respondents and Bigg reported that a good deal of administrative enhancement has taken place in schools where this has been pointed out as an area for development. ACAOM also requires programs to have, use and submit a significant amount of data about their programs, students, student success, factors associated with institutional strength, and similar information. It is unclear whether this level of data is required of programs in the CAB approval process. It may also be that ACAOM review has identified weaknesses in administrative and organizational resources at CAB approved schools leading to rejection of ACAOM accreditation or attention to these issues by ACAOM during ongoing evaluation of accredited programs. Examination of CAB and ACAOM documents would be required to fully explore this issue. Yet, the issue is important to address since operational standards are a required component of CAB's evaluation of programs, and concerns about the viability of particular AOM programs have been discussed at CAB meetings (California Acupuncture Board, 2004). Since CAB has no formal continuing evaluation, renewal or enforcement procedures that could compel programs to strengthen these capacities, there is insufficient information to draw a conclusion about the degree of any problems among approved institutions.

C. Possible implications of increase to 3,000 hours

The legislative increase to a minimum of 3,000 curricular hours required for approved acupuncture programs in California combined with the regulations proposed by the California Acupuncture Board to implement the legislation carry considerable potential implications for the public, schools, the Board itself, students, and current practitioners. There may also be overarching implications for the marketplace. Each of these areas is reviewed below. For examples of two other professions that have recently expanded educational requirements, see Appendix II.

Possible implications for the public

The major implication for the public will be significant differences in the education, training and preparation standards of licensed acupuncturists in California without any required notice of the differences. Within a few years, the pool of California licensed acupuncturists will include people who have had as few as 1,350 hours and as many as 3,000 hours of formal education (with different substantive curricular and clinical requirements within the total numbers). However, there are no plans to clarify for the public the differences among practitioners with varying levels of education and training. There is also no indication or discussion in the proposed regulations that the increase in hours will be associated with maintenance or increase in the quality of the academic programs. The public would likely be served if continuous improvement in the substantive quality of the educational programs for acupuncturists was at least on par with the number of hours that is the current focus of the approving agency.

Possible implications for schools

- The review of current course offerings revealed that some CAB-approved schools have educational programs that almost mirror current approval requirements. In other words, these programs teach so close to the current requirements (1,548 didactic and 800 clinical hours) that a significant expansion of their programs will be needed to comply with the new requirements.
- Informants indicated that acupuncture and Oriental medicine institutions already operate on slim operating margins. To develop new curriculum and provide adequate facilities and personnel to support program changes typically requires large resource expenditures and strategic planning. To effect changes quickly places a heavy strain on an institution's resources. This study did not assess the fiscal and organizational capacities of CAB-approved schools to meet this challenge. However, some data, including informant data and CAB meeting minutes suggest that numerous schools operate "on a shoestring." It is likely that complications will arise for these programs to comply with the new requirements. There is no way of predicting what outcomes will result from this situation.
- Several informants suggested that there is already a shortage of qualified faculty to teach specialized courses and basic sciences in AOM programs. If this is accurate, the necessity to meet new requirements quickly will likely put CAB-approved institutions into competition with each other, and could create unanticipated labor market pressures for these personnel. Further information

about the available workforce to fill these needs would be needed to suggest possible impacts.

- If increased educational requirements result in fewer applicants to programs, schools may lose tuition funds at the same time their costs increase to comply with the new requirements.
- For out-of-state schools, there is greater impetus to comply with national accreditation standards and their own state's legal requirements than to expend resources to comply with California state law, to which they are not subject. As indicated by survey responses, some schools may choose to drop their CAB approval in order to focus on these more relevant requirements. Survey responses also suggest there may be a tipping point in CAB policies and requirements that could prompt changes in out-of-state schools' participation in the approval process. The effect of various programs' choices cannot be predicted.
- A related issue is the unknown effect(s) that maintaining CAB-approval will have on the curriculum structure of out-of-state programs. As of July 2004, the Accreditation Commission for Acupuncture and Oriental Medicine will require schools to provide a total of 2,625 hours of broadly defined curriculum to maintain accreditation for Master's-level Oriental medicine programs. Although many programs already provide more than 2,175 hours, and some already provide over 3,000 hours of instruction, non-California based programs will be faced with the dilemma of how to structure education for students not interested in California licensure. This could require schools to develop educational tracts reflecting California and non-California requirements. Limited resources could compel the programs to impose CAB requirements on all students, which could place the schools at a market disadvantage in their own states, since students attending their programs may be required to take up to 1,100 more hours than would be required by other schools¹⁵. Further investigation of the ways in which out-of-state institutions plan to address CAB's new requirements would be needed to predict the outcomes of this impact.
- The impact on educational policy or policy development related to professional licensing in states where CAB-approved schools are located is also relevant. This study revealed no information describing how state governments plan to respond to the vastly different educational standards for schools in their states that hold CAB-approval versus schools that meet minimum state requirements. There is no compelling reason for other states to adapt their licensing requirements to accommodate graduates who have completed a greater number of hours of professional education. There is also no state that currently requires doctoral degrees for AOM practitioners, or has levels of specialized practice that would require schooling beyond current minimum requirements.

¹⁵ Currently, the minimum number of hours ACAOM accreditation requires of Oriental medicine (not Acupuncture) programs, which train students in acupuncture and the application of herbal practices is 2,175. As of July 2004, these programs will increase to a minimum of 2,625 hours. In states where herbal practice is not within the legal scope of practice, students may complete an ACAOM-accredited Acupuncture program that does not include herbal training components required in the Oriental medicine programs. The current minimum hours for these Acupuncture programs is 1,725, and will increase to 1,905 as of July 2004 (Accreditation Commission for Acupuncture and Oriental Medicine, October 2003). For further information, see Notes #1 in Appendix II of the companion study on accreditation.

Possible implications for the California Acupuncture Board

- The CAB currently has no formal, standardized renewal or enforcement procedures related to curriculum standards or program approval. To foster compliance, and to ensure that the purposes of educational program approval have concrete meaning, the Board needs to develop and implement these measures.
- Related to this are additional procedures that will be required to enforce the new requirements. There is no publicly available documentation describing monitoring or enforcement procedures or guidelines to accompany the impending curriculum changes. Further examination of internal CAB documents may indicate if these exist.
- In addition to its current licensing and professional oversight responsibilities, and its responsibilities for conducting school approvals, the CAB will need to carry out the work necessary to support 31 AOM educational programs through a very challenging structural transition. Analysis of approved programs' current instructional capacities indicated that some schools will have a difficult time meeting the new requirements. To appropriately promote the change, the CAB will need to provide technical assistance to some programs that could require a large devotion of resources.
- The very brief timeline imposed for schools to comply with the new requirements (the regulations were proposed in mid-2003, modified later in 2003 and must be in place for students entering programs on or after January 1, 2005) could necessitate re-consideration of this schedule. For reasons described in the previous section (*For schools*), some schools will not be able to comply in time. Since there appear to be no provisions for exceptions, or for sanctioning programs that fail to comply, it seems reasonable that realistic provisions of this sort would be needed to ensure a successful transition for all entities involved. This could take a great deal more time than has been allotted to effect the transition.
- The Board or other responsible organization would be well-served to evaluate the current transition process since further increases of curriculum hours, and eventual development of doctoral education or recognition of post-Master's degree credentials is already being discussed nationally and in California. Analysis of the information gathered in this study suggests that the transition to 3,000-hour education will already be a challenge. Numerous systemic components to ensure a smooth transition are absent. Therefore, evaluation of the current transition could indicate processes and structural components necessary to facilitate further changes in the future. Rigorous evaluation will require a good deal of resources and organization that may not be available to the Board.

Possible implications for students

- The primary implication for students concerns opportunity and financial costs associated with attending a training program that could take up to a year or longer to complete than existing programs. According to some educators, a number of students will leave the state to attend non-California programs and practice in

other states. Some students may choose not to pursue a career in acupuncture because of the increased time and cost associated with completing a longer program.

- There is an equal possibility that students from around the U.S. will be attracted to the enhanced program offerings of CAB-approved schools. As of January 2005, CAB requirements, based on competencies that were informed by a task force of educators and practitioners, will exceed ACAOM minimum requirements (the standard required by states other than California for a program's graduates to qualify for licensure).
- It is fair to suggest, based on both possibilities described above, that new requirements for institutions could have no impact on individual students in terms of the choices they make about school or career. However, if it is the case that the transition will place heavy burdens on instructional or fiscal resources of affected programs, it is certain that schools could increase tuition and fees or curtail previously offered educational or co-curricular activities which will directly affect students.
- Students attending out-of-state CAB-approved programs could judge negatively the relative advantages of completing a higher number of program hours if they may more easily license and practice outside California (see *For schools* bullet above). This could create tensions between students and school personnel on the affected campuses, or cause the students to leave these programs.
- As the national conversation about a move to doctoral education has centered on requirement of 4,000 hours, students in the future could weigh the costs and benefits of completing Master's degree programs requiring a high number of hours if they can receive a doctoral degree for what may be perceived to be slightly more hours. The AOM profession as a whole has not yet addressed the future of Master's degree education if doctoral degrees become widely accepted.
- There is, unfortunately, no feasible way to measure how students' choices will be influenced by the current transition. Students who will eventually be subjected to the new requirements for graduation may not currently know that they will apply to an AOM school after the changes have taken place. What will be more significant after the changes are implemented are the "educational marketplace" influences on students' decisions. Educational research has suggested that students' decisions about college or career are quite complex. Only post-implementation evaluation would be able to identify possible correlations between student choices and systemic changes taking place as a result of the new requirements.

Marketplace implications of increase in educational programs

The potential implications outlined above and speculation over what will constitute the tipping point in each case have implications for the structure of the acupuncture and Oriental medicine profession in California, and for the competitive advantage California currently may have in the marketplace of professional practice and professional education. Survey respondents from out-of-state schools indicated that these schools undergo CAB approval to enable their graduates to practice in California. In no case did

respondents indicate that approval is related to greater rigor or quality of education. While the added value of having CAB approval may be worth the fees charged by the Board, that value may lessen relative to the costs of implementing the proposed changes.

As of January 2005, CAB's 3,000-hour requirement will include a greater number of contact hours for didactic and clinical learning than the minimums required in other jurisdictions. If reliably enforced, the new standards proposed by CAB could provide greater assurance to the public that graduates of these programs have received one of the highest levels of education in the U.S. However, analysis of current curricula suggested the ability of some programs to meet these requirements is uncertain. Also at issue is the CAB's ability to implement and properly enforce the changes.

Possible implications for current practitioners

At present, neither statute nor regulation will require currently licensed acupuncturists in California to be subject to the proposed educational requirements. This reality means that, as of a few years from now, there will be licensed acupuncturists in the state with a wide range of educational experiences. Unless currently licensed practitioners undertake to study all of the courses that have been proposed in the new regulations (in addition to whatever they have studied in the past), the difference in their formal education and that of their more recently licensed peers will be a minimum of 652 hours. Some options to consider regarding this discrepancy are discussed below.

III. Options to consider for licensed acupuncturists who are not subject to the 3000-hour minimum curriculum requirement

According to the California Acupuncture Board's web site, the 1975 law that authorized the practice of acupuncture (upon prior diagnosis and/or referral by a physician, dentist, podiatrist, or chiropractor) required acupuncturists to be certified, to be at least 18 years old, and of good moral character. It also required them to complete an approved acupuncture course or have two years of experience, and pass an examination administered by the Acupuncture Committee. Since then, several changes and expansions to the scope of practice have been made, but there is no indication that already certified or licensed acupuncturists were required to meet supplemental educational requirements corresponding with the increases in educational requirements for new practitioners or expansions in scope of practice. Presumably, anyone who was licensed in 1975 upon completing a course *or* having 2 years of experience and passing an examination could be practicing today to the full extent of the legal scope of practice for acupuncturists in California.

The 2002 legislative increase in minimum curricular hours for approved acupuncture and Oriental medicine programs will add another level of practitioners in California although they will not have a different title or any different authority from other licensed acupuncturists. On the other hand, a few years from now, there will also be thousands of practitioners with active licenses who do not share the same level of educational preparation and experience as their more recently licensed peers.

Most of the health professions have gone through evolution of the educational programs leading to degrees and licensure and there are many options to consider.

Schooling or assessment of competencies - options that have been used to bring practitioners to standard when a profession increases requirements include:

- Recommending or requiring educational programs to develop and implement “catch up” programs to enable practitioners to gain required competencies
- Using test-out options to enable practitioners to demonstrate knowledge or skills in required competency areas for the purpose of acquiring updated training and credentials
- Establishing a feasible schedule upon which supplemental education or examinations can be completed, considering the professional responsibilities and workload of practitioners
- Defining and implementing differential levels of titling or categories of licensure (or add-on certification) that reflect the various formal education and/or career experience of all professionals within a specified jurisdiction (new and current licensees) and that indicates to the public the specified set of requirements that one or another practitioner has met.

Grandfathering and patient notification – other options have not required practitioners to meet the new standards in any way, including:

- “Grandfathering”- This is one of the most common approaches in dealing with current practitioners who have not had the same level of education or training as is being required of newer entrants into the profession, particularly for relatively minor increases in educational requirements. The currently licensed practitioner is permitted the full scope of practice without demonstration of any additional competencies or education. This approach is based on the reasoning that current practitioners, just by being in practice (and usually subject to ongoing continuing education requirements) are still competent to practice even though the educational standards for entry to the profession are changing.
- Public notification – Grandfathering may or may not require public notification that the practitioner is not subject to more recent laws or regulations. For example, providers might be required to post in public view or distribute individually to patients, written explanations describing the change in educational requirements, what this means for licensure of practitioners in California, and the year of graduation and number of hours completed in each provider’s formal degree program. Such disclosures could inform patients about differences among providers, which may or may not be judged by the patient as significant. Patients who value practical experience in care delivery might choose providers with more years in practice, without regard to formal education; patients who place a greater value on formal education might choose a practitioner who has completed the highest available level of training.

Determining which option is most appropriate should be based at least in part on the reasons for the changes in scope of practice and/or education. For the matter at hand, the proposed changes in acupuncturists’ education are not associated with a change in scope of practice, which would more definitively require demonstration of competence (if one were to have an expanded legal scope of practice authority but had not demonstrated competence in that area before).

The proposed changes for the acupuncture profession are for education (didactic and clinical) only but the reasons behind the changes are unclear. If the reasons for the changes were to address known risks of harm to the public due to inadequate education and training, the implications for current practitioners might be more serious because they are the ones who are practicing without the benefit of the increased levels of education. In such a case, as with expanding the legal scope of practice discussed above, it would be in the interest of the public to require currently licensed practitioners to demonstrate or test out on competence. Because the proposed changes in curricular requirements are significant and ambitious in number of hours, percentage increase, detail of substantive content, and speed of required implementation, they would appear to have been made to address an imminent threat to the public’s safety and would necessitate demonstration of competence by current practitioners. However, there has been no clear documentation of a correlation between known risks to the public and the regulations as proposed.

It would be instructive in determining which course of action to follow regarding currently licensed practitioners to know more about the reasons behind the changes so

that the problems that were meant to be addressed are in fact addressed in all groups that may contribute to the problems.

IV. Issues, questions and options regarding the possibility of increasing the minimum hours from 3,000 to up to 4,000 hours

A final question about the education of acupuncturists in California to be addressed in this study concerns the possibility of increasing the minimum hours of education from the recently-mandated 3,000 to up to 4,000.

Justifying a 4,000 hour minimum

Generally in the health professions, education is fairly closely aligned with the professional scope of practice. The curriculum is made up of whatever topics in whatever amount of time necessary to educate and train graduates to perform within their scope of practice upon entry to the profession. If the education falls short of the scope of practice, the public may be at risk; if the education is significantly broader than the scope of practice, a disservice is done to the students who are required to study subjects they will not use in their practices. At the same time, it is not unusual for professional education to be *slightly* more advanced than the professional scope of practice to permit natural evolution of the profession.

For acupuncture, the scope of practice has not changed recently and there are no proposals to expand it significantly in the near future. As such, there are many people who were admitted to practice within this full scope under the current (2,348 hour requirement) or earlier (as few as 1,350 or less) hours of education. There has been no evidence from disciplinary actions or malpractice claims that the public is at risk from those with less education compared to those with more practicing under the same acupuncture practice act. With the increase to 3,000 hours, licensed practitioners will have even more education and training to prepare them for practicing in California although, as noted above, this increase is not tied to an expanded scope of practice. Justifying an additional 1,000 hours without a corresponding expansion of practice authority would be difficult based on the alignment with scope of practice theory.

As with the move to 3,000 hours, the suggestion that 4,000 hours be the minimum has focused on the number of hours first and figuring out exactly what will comprise those hours second. This is an unusual way to structure curricular requirements at the professional training level. It would be more helpful, in justifying a move to 4,000 hours, to identify what competencies are currently lacking among graduates, and what course work – in what amount – would help address those shortcomings.

Other arguments for increasing the hours can be found in culture and equity. In particular, several informants and opinion makers have suggested that other health professions (especially those whose members may be called “doctor”, a title that many in the acupuncture community would like to have) require 4,000 hours or more of education so acupuncturists should also be required to meet these requirements. However, the legal scopes of practice for the other professions also vary considerably from that of licensed acupuncturists; the other scopes are usually broader and thus the higher number of hours is more justified. Adding another 1,000 hours just to get the title “doctor” is a questionable public policy decision.

There is not consensus among members of the California acupuncture community on this issue. Although not asked about the topic on the survey, several of the respondents volunteered support for a move to 4,000 hours or doctoral level training as minimum entry into the profession. One respondent cautioned that increasing requirements to 4,000 hours without issuing a doctoral degree, however, could lessen the attractiveness of California AOM education for potential students. As indicated by the Board's Competency Task Force, the recommended 3,000 hours as the minimum for entry to practice was viewed as a compromise. There were those who would have preferred fewer hours and those who would have preferred more. There is not agreement that 4,000 hours, for whatever reason or justification, should be the minimum number of curricular hours required for entry into the acupuncture profession in California.

Feasibility of increasing the minimum hours to 4,000

As noted above in the section regarding the recent move to 3,000 hours as the minimum, significant challenges will be faced by the California Acupuncture Board and the approved schools in implementing the increase currently being put into place. In addition, there will likely be considerable implications for students and practitioners. Until this change to 3,000 hours has been completed, it is unknown exactly how difficult the transition may be. An increase of an additional 1,000 hours, in whatever subject or courses determined, would be hard to envision in the near future.

Appendix I

Alternative routes to licensure: Other educational programs approved by CAB

The CAB approves tutorial programs, similar to apprenticeship, for applicants for the state licensure examination. Requirements for tutorials are described in California law (California Code of Regulations title 16 Sec. 1399.425, 2004). Supervisors must have a current California acupuncture license, no more than two trainees at a time, ten years of relevant practice including five years in California, and approval by the Board. Fees for tutorial training include \$200 initial fee for supervisors with \$50 annual renewal, and \$25 annual fee for trainees. There is little publicly-available information about the process of tutorial approval, although discussion about approvals or Board acceptance for the tutorial study of specific individuals is addressed in Board meeting minutes (California Acupuncture Board, 2004).

The CAB also approves formal education received from non- U.S. programs by applicants for the California licensing exam. Historically, the process for this approval has been unstructured and conducted on a case-by-case basis using the educational requirements of CCR Section 1399.416 as a guideline. In its July 2003 proposed regulations (California Acupuncture Board, July 14, 2003), the CAB recommended authorizing the National Association of Credentials Evaluation Services (NACES) to review and verify the training backgrounds of foreign graduates (California Acupuncture Board, July 14, 2003). NACES is a nationally-regarded association of professional evaluators, and a private partner of the U.S. Department of Education (U.S. Department of Education, 2004). Key informant data in this study indicated resentment by some California AOM professionals based on a perception that U.S.-educated students must meet more stringent requirements for the California licensing exam than do foreign graduates. Further examination of internal CAB documentation describing the history of these approvals could enhance understanding of the roots of this perception. However, the Board's support for utilizing an outside, objective evaluator to assess the qualifications of foreign graduates is likely to make this process less subjective, potentially counteracting the perception.

Appendix II

Implications of change and transition in health professions education

Transitional processes in related health professions education

Acupuncture and Oriental medicine is not the first profession to undergo transition in educational and credentialing standards. Over recent decades, state governments, that control the licensing of health professions, have driven changes in this arena. National professional organizations and the federal government, in some cases, have also provided the impetus for, or imposed mandatory changes that have resulted in increases in educational program hours needed for graduation or licensing. Even non-mandatory national changes, though they may take years to trickle down to the practitioner level, have established norms or informal standards with which all professionals eventually comply. Conversely, states have mandated changes in minimum education or practice requirements that have then been replicated by other states, until a national standard is incrementally established.

Two recent professional transitions could be instructive as models of change, or case studies providing insight into the impact of transitions related to those occurring in AOM education in California.

In 1997, the American Council on Pharmaceutical Education (ACPE) formally issued guidelines for a comprehensive transition to doctoral level education as the minimum point of professional entry for pharmacists (American Council on Pharmaceutical Education, June 14, 1997). The deliberations leading to this document began in 1985, and since then, a body of professional literature has grown around the issue of this professional transition, including several scientifically structured studies of its impact on professionals, students, institutions and the public. By 1997, a complex but clear set of guidelines was established that communicated to schools interested in maintaining their accredited status, the steps they must take to comply. Baccalaureate programs were expected to demonstrate accommodations made to enable practicing pharmacists to supplement their education to doctoral equivalency (American Council on Pharmaceutical Education, 1997). Final steps of the transition will not be completed until June 2004, indicating that such a major shift in a profession is not a quick or easy process. Further, this was all profession-driven. Neither state practice acts nor delivery sites practice models have fully embraced the changes.

The physical therapy profession is currently undergoing a similar transition to doctoral level as a professional entry point for providers. In contrast to the transition in pharmacy, accredited and non-accredited schools and practicing professionals may voluntarily comply with transition measures based on a strong statement by a national coalition of professional associations to establish doctoral education as the minimum standard of professional entry. The American Physical Therapy Association (APTE) and the profession's accrediting agency (CAPTE) acknowledge that state licensing and titling laws do not yet recognize a Doctor of Physical Therapy degree, but "unequivocally" support this transition and encourage practitioners to pursue the increased level of

education (American Physical Therapy Association, 2004b). Rather than compelling training programs to comply with the new standards through accreditation, as pharmacy did, a “coalition of consensus” established “a plan of support of the ‘transition’ Clinical Doctorate” (TDPT, or t-DPT) that includes 20 competency areas that must be measured individually via a choice of means. Among these means, APTA developed a pre-admission testing instrument (a placement test) that individual practitioners can self-administer before applying to a t-DPT program; a preferred curricular guide for schools; and specific types of administrative support for schools to promote the transition (American Physical Therapy Association, 2004a). APTA anticipates that t-DPT and advanced clinical doctoral programs in physical therapy will co-exist for a period of up to 15 years, essentially allowing educational market demand to phase out the t-DPT degree as doctoral entry becomes the professional norm (American Physical Therapy Association, 2004b).

These examples suggest that transitions can take place as a result of through changes in education and/or accreditation, either by mandating compliance or encouraging voluntary compliance. They also demonstrate that transitions are likely to take years or decades to implement fully so that procedures and structures associated with reforms can be adapted. Each of these examples demonstrates that providing sufficient flexibility, time and space for change can facilitate compliance. Buy-in by all entities affected by reforms is essential, and if acknowledgement of and accommodation for debate and dissent is built into the process from the very beginning, broad-based investment in the effort can result. It remains to be seen if either of these moves will be viewed in the future as successful advances. At present, significant tension exists between academic changes and practice status quo.

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